REMARKS

Paragraphs in pages 26-31 have been replaced with the amended paragraphs. The amendments are to correct the mislabeling of Examples and correct references to these Examples in the specification. More specifically, the number 5 is used in the Examples twice, once for Examples 1-5 in Table 1 and once for Example 5 in Table 4. Therefore, the second reference to Example 5 was changed to Example 7 in Table 4 and the supporting paragraphs for Table 4. In changing the second reference to "Example 5" to Example 7, the reference to Example 7 on pages 29-31 was changed to refer to this Example as Example 8. No new matter has been added.

Claim 4 has been cancelled as the majority of its contents have been incorporated into amended Claim 1.

Applicants have amended Claims 1, 22, 30, 31, and 32 to delete the limitation that the T95 point of the distillate fuel compositions and distillate of Claim 32 is greater than about 335.

Applicants have also amended Claims 1, 31, and 32 to include the limitation that the distillate fuel has a total aromatics content of about 20 to 35 wt.%. Supports for this amendment can be found in original Claim 4 as filed, and page 14, second paragraph of the instant specification.

Applicants request that the Examiner enter all amended claims and pages in order to place this application in condition for allowance or in better form for appeal.

Applicants submit herewith a Petition to Revive and the required fee for the unintentional abandonment of the instant application.

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Applicants also submit herewith a Change of Correspondence Address form and a Request for Continued Examination.

OBJECTION UNDER 35 U.S.C. 132(b)

The amendment filed January 3, 2002 has been objected to under 35 U.S.C. 132(b) because it introduces new matter.

EXAMINER'S POSITION

The Examiner takes the position that there is no support for the limitation of a T95 point "greater than about 335°C".

APPLICANTS' POSITION

Applicants have removed this limitation from Claims 1, 22, 30, 31, and 32. The Examiner is requested to withdraw this objection.

REJECTION UNDER 35 U.S.C. 112, FIRST PARAGRAPH

Claims 1-32 have been rejected under 35 U.S.C. 112, first paragraph as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, had possession of the claimed.

EXAMINER'S POSITION

There is no support for the claimed "greater than about 335°C" limitation.

APPLICANTS' POSITION

Applicants have removed this limitation from Claims 1, 22, 30, 31, and 32. The Examiner is requested to reconsider and withdraw this rejection.

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REJECTION UNDER 35 U.S.C. 103(a)

Claims 1-3, 6-9, 14-21, 34 and 35 are rejected under 35 U.S.C. 103(a) as being obvious over United States Patent Number 6,150,575 Angevine et al. ("Angevine").

EXAMINER'S POSITION

It is the Examiner's position that Angevine teach diesel fuel having good ignition qualities, good combustion emission performance, and good low temperature characteristics. Such a fuel is characterized as having a cetane number of at least 45, a total aromatics content of 10 to 15 wt.%, a polynuclear aromatics content of less than 11 wt.%, and a sulfur content of not more than 50 ppm. The Examiner points out that Table 3 of Angevine discloses preferred compositional parameters for the fuel and that Table 4, Example 1 teaches a diesel fuel having 14 wt.% total aromatics, 0.6 wt.% polynuclear aromatics, 13 ppm sulfur, an initial boiling point of 183°C, T10 point of 225°C, and a final boiling of 360°C.

The Examiner states that the instant claims are directed to compositions comprising "about 20 wt.% aromatics," i.e. the claims include compositions wherein the total aromatics are less than 20 wt.%. Accordingly, the Examiner takes the positions that it should have been obvious to one having ordinary skill in the art at the time the invention was made to increase the amount of aromatics in the diesel fuel taught by Angevine to a maximum amount of "about 20 wt.%" based on the expectation that such a diesel would have similar properties. The Examiner also takes the position that the claimed T95 point is obvious in light of Example 2 of Angevine.

APPLICANTS' POSITION

Applicants respectfully disagree with the Examiner as it is their position that Angevine does not render obvious the instantly claimed invention. The instantly claimed invention, as amended, requires that the distillate fuel composition have a Total

Aromatics concentration of from about 20-35 wt.%, as described in Claims 1, 22, 31, and 32, and from about 25-35 wt.% in Claim 30.

There is no teaching in Angevine to suggest that the amount of Total Aromatics disclosed and claimed therein should be increased to the presently claimed range. Angevine discloses that the "board value" of Total Aromatics is less than 10, and that the "preferred value" is between 10-15, see Table 3 of Angevine. Table 3 also discloses an optimum value but gives no range. However, col. 4, states that "the observance of certain narrower ranges within the ranges described above may however lead to an enhancement of overall performance, an improvement in product economics or both. Suitable preferred ranges are set out in Table 3, using the same tests as listed in Table 2 above.", see Angevine col.4, lines 53-58. Table 2 of Angevine discloses a Total Aromatics content of between 10-15 wt.%. Further, all of the Examples contained within the Angevine patent are below 15 wt.% Total Aromatics.

Therefore, Angevine does not teach nor suggest that one should have a Total Aromatics content within the presently claimed range of 20-35 wt.%. Instead, Angevine teaches that narrower ranges within the 10-15 wt.% Total Aromatics range would be beneficial. There is no disclosure that one should increase the range of Total Aromatics beyond 15 wt.%.

The Examiner is requested to reconsider and withdraw this rejection.

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Based on the preceding arguments and amendments, the Examiner is requested to reconsider and withdraw all rejections and objections, and pass this application to allowance. The Examiner is encouraged to contact applicants' attorney should the Examiner wish to discuss this application further.

Respectfully submitted:

Date: 3-12-03

Jeremy J. Kliebert, Registration No. 48,227
Attorney for Applicants
Telephone: (225) 977-1592
Facsimile: (225) 977-1025

Correspondence Address:
ExxonMobil Research and Engineering Company
P. O. Box 900
Annandale, New Jersey 08801-0900

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VERSION WITH MARKINGS TO SHOW CHANGES MADE:

IN THE SPECIFICATION:

The paragraph beginning at page 26, line 12, has been amended as follows:

The following data was generated from two distillate fuels. The first one, Example 6, was prepared in a commercial hydrodesulfurization unit from a virgin distillate feed using a conventional $CoMo/Al_2O_3$ catalyst and represents a typical commercial diesel fuel composition. The second one, Example [5] 7, is a composition according to the present invention, as set forth in Table 1. The properties of these two fuels are shown in Table 4 below.

Table 4, page 26, beginning at line 18, bridging to page 27, has been amended as follows:

Table 4

	Example 6	Example [5] 7
Sulfur (wppm)	400	61
Mono-aromatics (% wt)	19.26	21.38
Polynuclear aromatics (% wt)	4.84	1.74
Total aromatics (% wt)	24.10	23.12
Aromatics/PNAs	5.0	13.3
Density (kg/m^3)	844.1	838.8
Cetane No.	55.8	56.5
T_{95} (°C)	337.0	335.1

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The paragraph beginning on page 27, line 4, has been amended as follows:

These fuels were run in a fleet of 3 light-duty diesel vehicles encompassing traditional and modern technology, i.e., one with distributor pump technology, one with common rail fuel injection technology and one with electronic unit injector technology. Each fuel was tested three times in each vehicle (a total of nine tests per fuel) comprising a cold-start legislated European type certification drive cycle (ECE + EUDC) in order to determine average particulate emissions and average NOx emissions for both fuels. These average values were then compared to the predicted values for both fuels in accordance with the European Programme on Emissions, Fuel and Engine (EPEFE) technologies and the AutoOil equation for the effect of sulfur to determine the expected performance of the fuels now used. The EPEFE program is based on an established set of equations from testing of 11 diesel fuels in 19 vehicles to predict the emissions performance of a fleet of vehicles based upon the fuel parameters: cetane No., density and polycyclic aromatic content. On the basis of the differences in fuel parameters between Example 6 and Example [5] 7, the EPEFE calculations would lead one to expect lower particulate matter and NOx emissions for the fuel of Example [5] 7.

The paragraph beginning on page 27, line 20, bridging to page 28, has been amended as follows:

The results shown in Table 5 below show the average difference between the predicted reduction in emissions obtained from the EPEFE calculations and the observed reduction in average emissions for the fuel of Example [5] 7 vs. the fuel of Example 6. Surprisingly, the data indicate that the reduction in NOx and particulate matter emissions achieved using the fuel compositions of the present invention (Example [5] 7) were substantially greater than that predicted for any of the 19 vehicles used in the EPEFE program as well as being significantly lower than the EPEFE fleet average. In table 5, as in

table 7 below, negative percentages indicate an emissions [pefomance] **performance** improvement.

The paragraph beginning on page 28, line 3, has been amended as follows:

Table 5. EPEFE/AutoOil predictions and actual fleet measurements for Example [5] 7 emissions vs. Example 6 emissions(%)

The paragraph beginning on page 29, line 28, has been amended as follows:

The fuel of Example 6 was also compared to another fuel of the present invention, Example [7] 8. Table 6 below shows the properties of these fuels.

Table 6, page 30, beginning at line 1, has been amended as follows:

Table 6

	Example 6	Example [7] 8
Sulfur (wppm)	400	14
Mono-aromatics (% wt)	19.26	20.09
Polynuclear aromatics (% wt)	4.84	1.19
Total aromatics (% wt)	24.10	21.28
Aromatics/PNAs	5.0	17.9
Density (kg/m^3)	844.1	843.0
Cetane No.	55.8	56.8
T_{95} (°C)	337.0	336.9

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The paragraph beginning on page 30, line 11, has been amended as follows:

The fuels were run in a single light-duty diesel vehicle with common rail fuel injection technology. Each fuel was tested 3 times, where a test constituted a cold-start legislated European type certification drive cycle (ECE+EUDC). The relative emissions levels achieved from the Example **[7]** **8** fuel tests (relative to Example 6) were evaluated and compared with established EPEFE and AutoOil predictions, as in the comparison between the fuels of **[examples]** **Examples** **[5]** **7** and 6. The results, shown in Table 7 below, indicate that for average particulate matter and NOx emissions the reduction achieved for the fuel of Example **[7]** **8** was unexpected as it was greater than that predicted for any of the 19 vehicles used in the EPEFE program, as well as being significantly lower than the EPEFE fleet average.

The paragraph beginning on page 31, line 1, has been amended as follows:

Table 7. EPEFE / AutoOil predictions and actual fleet measurements for Example **[7]** **8** emissions relative to Example 6 emissions (%)

IN THE CLAIMS:

1. (twice amended) A distillate fuel composition boiling in the range of about 190°C to 400°C with a T10 point greater than 205°C, **[a T95 point of greater than about 335]**, and having a sulfur level of less than about 100 wppm, a total aromatics content of about **[15]** **20** to about 35 wt.%, a polynuclear aromatics content of less than about 3 wt.%, and wherein the ratio of total aromatics to polynuclear aromatics is greater than about 11.

4. **Claim 4 has been cancelled.**

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22. (twice amended) A distillate fuel composition boiling in the range of about 190°C to 400°C with a T10 point greater than 205°C, **[a T95 point of greater than about 335,]** and having a sulfur level of less than about 50 wppm, a total aromatics content of 20 to about 35 wt.%, a polynuclear aromatics content of less than about 2 wt.%, and wherein the ratio of total aromatics to polynuclear aromatics is greater than about 13.

30. (twice amended) An automotive distillate fuel composition boiling in the range of about 190°C to 400°C with a T10 point greater than 205°C, **[a T95 point of greater than about 335°C,]** and having a sulfur level of less than about 10 wppm, a total aromatics content of about 25 to 35 wt.%, a polynuclear aromatics content of less than about 1 wt.%, wherein the ratio of total aromatics to polynuclear aromatics ranges from about 15 to about 25.

31. (twice amended) A method for abating particulate and Nox emissions in a compression ignition engine comprising providing to the engine a distillate fuel composition boiling in the range of about 190°C to 400°C with a T10 point greater than 205°C, **[a T95 point of greater than about 335,]** and having a sulfur level of less than about 100 wppm, a total aromatics content of about **[15]** **20** to 35 wt.%, a polynuclear aromatics content of less than about 3 wt.%, and wherein the ratio of total aromatics to polynuclear aromatics is greater than about 11.

32. (twice amended) A fuel composition comprising a distillate boiling in the range of about 190°C to 400°C with a T10 point greater than 205°C, **[a T95 point of greater than about 335°C,]** and having a sulfur level of less than about 100 wppm, a total aromatics content of about **20** **[15]** to 35 wt.%, a polynuclear aromatics content of less than about 3 wt.%, and wherein the ratio of total aromatics to polynuclear aromatics is greater than about 11, to which is added at

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least one of (i) one or more lubricity aid, (ii) one or more viscosity modifier, (iii) one or more antioxidant, (iv) one or more cetane improver, (v) one or more dispersant, (vi) one or more cold flow improver, (vii) one or more metals deactivator, (viii) one or more corrosion inhibitor, (ix) one or more detergent, and (x) one or more distillate or upgraded distillate.